

departure from the Cape necessitated the packing of my shell-collection before I had time to record the capture of the living mollusk; and my cabinets remaining unopened till a few weeks back, I thought no more of my discovery. Lately, however, I have become aware of a point in the economy of *Cœliaxis layardi* that may be of interest to conchologists; and I therefore communicate this note. In picking out some specimens for exchange with a gentleman in Sydney, I was surprised to find a minute specimen fall from one I held in my hand. On tapping it gently, eight or ten more fell; and on examining others, I obtained several more. It is thus clear that this curious shell (which resembles a small *Megaspira ruschenbergiana*) is a viviparous species. The young shells show all the beautiful striae of the parent; and the young animal, showing through the pellucid shell, is of a reddish-buff colour.

Noumea, New Caledonia,
May 20, 1881.

7. Notes on the Genus *Chilina*, with a List of the known Species. By EDGAR A. SMITH.

[Received August 22, 1881.]

The object of the present paper is specially to point out several errors which appear in a monograph by Sowerby in the 'Conchologia Iconica,' written in 1874, and to contradict the statement that many of the figures are taken from specimens in the British Museum. This is most important, as hereafter it might be supposed that the shells in question had been lost or in some way removed from the Museum collection. The figures in the monograph referred to are but copies in many instances of those which appeared thirty years ago in the 'Conchological Illustrations' by the same author. The figures on plate i. which are taken from the old monograph are the following:—fig. 1 *a* (*C. fluviatilis*); fig. 2 *b* (*C. fuminea*); figs. 3 *a*, 3 *b* (*C. major*); fig. 4 *b* (*C. dombeyana*); and figs. 5 *a*, 5 *b* (*C. robustior*).

On plate ii. the following are copies:—fig. 6 *c* (*C. ovalis*); figs. 7 *a*, 7 *b* (*C. fluctuosa*); fig. 8 *a* (*C. ampullacea*); and figs. 9 *a*, 9 *b* (*C. gibbosa*).

On plate iii., fig. 10 (*C. puelcha*), fig. 12 *a*, 12 *b* probably (*C. tehuelcha*), fig. 14 (*C. tenuis*), and fig. 17 (*C. parchappii*), are likewise copies.

In each instance, with the exception of fig. 14 (*C. tenuis*), Mr. Sowerby states that the figures are from specimens in the British Museum. This, I am bound to observe, is totally incorrect. Not in a single case is such the fact; for neither the collection of Mr. Cuming nor that of the Museum contain any shells answering to these drawings. The only figures representing shells actually in the Museum are figs. 6 *a*, 6 *b* (*C. acuminata*), fig. 2 *c* on plate iii. (*C. fuminea*, var.), fig. 11 (*C. patagonica*), fig. 13 (*C. elegans*), fig. 15 (*C. fasciata*), and fig. 16 (*C. subcylindrica*). Unfortunately I am

compelled to say that all these seven figures are very badly drawn and wretchedly coloured, and, in fact, are very unlike the specimens they are supposed to delineate. This will be readily believed by any one who will compare the figures in the 'Conchologia Iconica,' which are mere copies, with the originals, and see the rough manner in which they have been executed.

I am unfortunate in having to follow Mr. Sowerby's work; for it always provokes censorial criticism, which is very distasteful to me; but having under my immediate charge the collections which form the material upon which most of his monographs are founded, I feel it a duty to point out and correct such errors as I meet with, in order that it may be known that these do not exist in the Museum.

The descriptive portion of this monograph is very defective, especially with regard to references. Species 1, *C. fluviatilis*, is attributed to Gray as if a manuscript name in the Museum, whereas it was described by Maton in the 'Linnean Transactions' of 1809.

Species 2, *C. fluminea*, is likewise assigned to Gray, who, although the first to place the species in the section *Chilina*, was not the author, it having been originally named by Maton at the same time he described *C. fluviatilis*, of which it is considered but a variety by d'Orbigny and myself.

Species 4, *C. dombeyana*, is said to be of Sowerby instead of Bruguière.

Species 10, *C. puelcha* (wrongly numbered 11), is quoted as of d'Orbigny's manuscripts, whereas it has been fully described and figured by that author in the 'Voyage dans l'Amérique méridionale;' and the same observations apply to *C. tehuelcha*.

Species 13 (14 in the work), *C. elegans*, is stated to be a manuscript name of Fairfield in the British Museum. This absurdity shows Mr. Sowerby's complete ignorance of Frauenfeld's (the true author of the species) paper on this genus, published in the 'Verhandlungen der zoologisch-botanischen Gesellschaft in Wien' for 1866.

Species 15 (erroneously numbered 16), *C. fasciata*, is quoted as of Gould, followed by a —?, indicative of Mr. Sowerby's doubt whether any description had ever been published. It was described in 1847 as *Dombeya fasciata* by Gould in the 'Proceedings of the Boston Society of Natural History,' and subsequently figured in the Atlas of Wilkes's Exploring Expedition.

Finally, species 17 (wrongly lettered 18), *C. parchappii*, is referred to "Orbigny, Synopsis." This is extremely vague, being but the initial word of d'Orbigny's paper in the 'Magasin de Zoologie' for 1835, entitled "Synopsis terrestrium et fluviatilium Molluscorum in suo per Americam meridionalem itinere ab A. d'Orbigny collectorum."

The localities given in the 'Conchologia Iconica' are quite as misleading and unsatisfactory as the figures. *C. fluviatilis*, from the Rio de la Plata according to Maton and d'Orbigny, is said to be Chilian by Sowerby. *C. fluminea*, which is but a variety, and described by Maton from the same river, has the comprehensive habitat "S. America" attributed to it. Several others, viz. *C. major*, *C.*

robustior, *C. fluctuosa*, *C. ampullacea*, *C. gibbosa*, *C. tehuelcha*, *C. tenuis*, and *C. fasciata*, have the same vague geographical distribution assigned to them, although in some instances their precise localities were already known.

Certain species are quoted from Baldivia and Boldivia, which are misspellings of Valdivia in Southern Chile. These are *C. acuminata*, *C. puelcha*, and *C. elegans*.

The collection of this genus in the Museum contains the actual types described and figured by d'Orbigny, also the series from Mr. Cuming's collection which was recorded and named by Frauenfeld, and the types of the new species described in the 'Conchologia Iconica.' Of the nineteen species hereafter enumerated, the following are wanting—namely *C. angusta*, Philippi, *C. globosa*, Frauenfeld, *C. parva*, Martens, *C. portillensis*, Hidalgo, and *Pseudochilina limnæformis*, Dall.

Family CHILINIDÆ,

Dall, Ann. Lyc. Nat. Hist. N. York, 1870, vol. ix. p. 357.

GENUS CHILINA.

Bulimus (part.), Bruguière; *Conovulus* (part.), Lamarck; *Auricula* (part.), Lamarck and Lesson; *Otis* (part.), Humphreys; *Voluta* (part.), Maton; *Chilina* (subgen.), Gray; *Dombeia*, d'Orbigny and Gould; *Limneus*, d'Orbigny; *Chilinia*, Woodward; *Potamophila*, Swainson.

1. CHILINA DOMBEIANA, Bruguière.

Bulimus dombeianus, Brug. Encyclo. Méth. Hist. Nat. Vers, tome vi. p. 335, no. 66.

Conovulus bulimoides, Lamarck, Tab. Ency. Méth. pl. 459. f. 7 a.

Auricula dombeyana, Lamarck, An. s. Vert. vol. vi. p. 140; ed. 2, vol. viii. p. 331.

Chilina dombeyana, Gray, Spicil. Zool. p. 5; Küster, Conch.-Cab. p. 66, pl. 9. f. 18, 19; Sowerby, Conch. Ill. f. 11; id. Conch. Icon. f. 4 a, b; id. Conch. Man. f. 300; d'Orbigny, Voy. Amér. mérid., Mollusques, p. 333; Hupé, Gay's Hist. Chile, vol. viii. p. 128; Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, vol. xvi. pp. 192-195.

Auricula fluviatilis, Lesson, Zool. Voy. Coquille, p. 342.

Limneus dombeianus, d'Orb. Mag. de Zool. 1835, p. 25.

Chilina fluctuosa, Sow. (non Gray) Conch. Ill. f. 2; id. Conch. Icon. f. 2; Reeve, Conch. Syst. pl. 189. f. 2.

Hab. Rio de Maule (d'Orbigny); river Peneo, near Concepcion, Chile (Lesson).

2. CHILINA FLUCTUOSA, Gray.

Otis fluctuosa, Humphreys, Mus. Calonnianum, p. 62.

Auricula (Chilina) fluctuosa, Gray, Spicil. Zool. p. 5, pl. vi. f. 19.

Chilina fluctuosa, d'Orb. Voy. Amér. mérid. p. 334, pl. 43. f. 13-16; Küster, Conch.-Cab. p. 64, pl. 9. f. 7-9; Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, pp. 192-197; Martens, Mal. Blät. 1869, p. 217; Hupé, Gay's Chile, vol. viii. p. 128.

Var. = *Chilina tenuis*, Sowerby, Conch. Ill. f. 12; id. Conch. Icon. f. 14; Hupé, loc. cit. p. 129, pl. 3. f. 11?

Var. = *Chilina ovalis*, Sowerby, Conch. Ill. f. 6; Küster, f. 12-14; dentition by Dall, Ann. Lyc. N. York, 1870, vol. ix. p. 347.

Var. = *Chilina elegans*, Frauenfeld, loc. cit. p. 196 (woodcut).

Hab. Near Valparaiso, on the coast, in small streams which fall in cascades from the rocks and cliffs (*d'Orbigny*); Rio Coucon (*id.*); South Chile, near Puerto Moutt (*Martens*).

3. CHILINA FLUMINEA, Maton.

Voluta fluminea, Maton, Trans. Linn. Soc. 1809, vol. x. p. 330, pl. 24. f. 14, 15.

Voluta fluviatilis, Maton, loc. cit. f. 13.

Chilina fluminea, Gray, Spicil. Zool. p. 5; Sowerby, Conch. Ill. f. 7; id. Conch. Icon. pl. 1. f. 2*a, b*, pl. 3. f. 2*c*; Reeve, Conch. Syst. pl. 189. f. 7; Küster, Conch.-Cab. p. 66, pl. 9. f. 15-17, pl. 10. f. 10, 11; *d'Orbigny*, Voy. Amér. mérid. p. 337, pl. 43. f. 19, 20; *Martens*, Mal. Blät. 1868, p. 184; *Heynemann*, Mal. Blät. 1868, vol. xv. p. 112, pl. 5. f. 11 (dentition).

Limneus flumineus, *d'Orb.* Mag. de Zool. 1835, p. 25.

Hab. Rio de la Plata (*Maton*); Buenos Ayres (*d'Orb.*); "Im Guahyba bei Porto Alegre" (*Martens*).

4. CHILINA BULLOIDES, *d'Orbigny*.

Limneus bulloides, *d'Orb.* Mag. de Zool. 1835, p. 24.

Chilina bulloides, *d'Orb.* Voy. Amér. mérid. p. 335, pl. 43. f. 18; Hupé, Gay's Hist. Chile, vol. viii. p. 129, Atlas, pl. 3. f. 10-10*a*.

Chilina ampullacea, Sow. Conch. Ill. f. 3; id. Conch. Icon. f. 8*a, b*; Reeve, Conch. Syst. pl. 189. f. 3; Küster, Conch.-Cab. p. 62, pl. 10. f. 12 (after Sowerby); Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, pp. 192-194.

Hab. Island of Chiloe (*d'Orb.*).

5. CHILINA PARCHAPPII, *d'Orbigny*.

Limneus parchappii, *d'Orb.* Mag. de Zool. 1835, p. 25.

Chilina parchappii, *d'Orb.* Voy. Amér. mérid. p. 338, pl. 43. f. 45; Sowerby, Conch. Ill. f. 8; Küster, Conch.-Cab. p. 67, pl. 10. f. 5-7; Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, pp. 192-196; Sowerby, Con. Icon. f. 17.

Hab. Arroyo de las Achiras, Pampas du sud, and Arroyo Salado, Pampas Répub. Argentine (*d'Orbigny*).

6. CHILINA GIBBOSA, Sowerby.

Chilina gibbosa, Sowerby, Conch. Ill. 1841, f. 4; id. Conch. Icon. f. 9*a-b*; Reeve, Conch. Syst. pl. 189. f. 4; Küster, Conch.-Cab. p. 68, pl. 10. f. 13-14.

Chilina tehuelcha, *d'Orb.* 1847, Voy. Amér. mérid. p. 336, pl. 43. f. 6, 7; Sow. Conch. Ill. f. 9; id. Conch. Icon. f. 12 *a, b*; Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, pp. 192-196.

Hab. Rio Negro, Patagonia (*d'Orbigny*).

7. CHILINA ROBUSTIOR, Sowerby.

Chilina robustior, Sowerby, Conch. Ill. f. 1; id. Conch. Icon. f. 5a, b; Küster, Conch.-Cab. p. 67, pl. 10. f. 1, 2 (copied from Sowerby); Frauenfeld, Verhandl. &c. pp. 192-196; Reeve, Conch. Syst. pl. 189. f. 1 (the same plate as in the 'Conchological Illustrations').

Hab. S. America (*Sowerby*).

The series of specimens of *C. gibbosa* in the Museum appear almost to connect it with the present species. The latter, nevertheless, may be distinct, on account of the development of the upper fold, or that above the large columellar one.

8. CHILINA MAJOR, Sowerby.

Chilina major, Sowerby, Conch. Ill. f. 10; id. Conch. Icon. f. 3a, b; Küster, Conch.-Cab. pl. 9. f. 1-2??; Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, pp. 192-195.

Hab. S. America (*Sowerby*); Valdivia (*Mus. Cuming*).

This species is hardly distinguishable from *C. dombeiana*, and ought, perhaps, to be considered a large and rather broad variety of it. The figure in Küster's work does not accord with that in the 'Conchological Illustrations,' nor does his description apply to it.

9. CHILINA PUELCHA, d'Orbigny.

Chilina puelcha, Voy. Amér. mérid. p. 336, pl. 43. f. 8-12; Sowerby?, Conch. Ill. f. 13; Küster, Conch.-Cab. p. 63, pl. 9. f. 5, 6; Woodward, Man. Moll. fig. 96; ed. 3, fig. 129 (as *C. pulchra*).

Hab. Rio Negro, Patagonia (*d'Orb.*).

10. CHILINA OBOVATA, Gould.

Dombeya obovata, Gould, Proc. Bost. Soc. Nat. Hist. 1847, vol. ii. p. 211; id. Otia Conch. p. 41; id. Moll. Wilkes's Explor. Exped. p. 124, pl. 9. figs. 143, 143a.

Chilina obovata, Gould, Otia, p. 244; Frauenfeld, loc. cit. pp. 192-195.

Hab. Concon River, Chile (*Gould*).

11. CHILINA PARVA, Martens.

Chilina parva, Martens, Malacozool. Blätter, 1868, vol. xv. p. 185.

Hab. In the primeval forest at Rödersberg, South Brazil, in small streamlets (*Martens*).

12. CHILINA FASCIATA, Gould.

Dombeya fasciata, Gould, Proc. Bost. Soc. Nat. Hist. 1847, vol. ii. p. 211; id. Otia Conch. p. 41; id. Moll. Wilkes's Explor. Exped. p. 123, Atlas, pl. 9. figs. 145, 145a.

Chilina fasciata, Gould, Otia Conch. p. 244; Frauenfeld, loc. cit. pp. 192-195; Sowerby, Conch. Icon. f. 15 (bad).

Chilina acuminata, Sow. Conch. Icon. f. 6a-b.

Hab. River Concon, Chile (*Gould*).

There are four bands on the last whorl, as depicted in Sowerby's wretched figure, and not three, as stated by him in the text. They

are of a brownish colour, and not strongly marked, and more like those represented in the figure of *C. acuminata*, which is undoubtedly the same species.

13. *CHILINA ANGUSTA*, Philippi.

Chilina angusta, Philippi, Reise durch die Wüste Atacama, 1860, p. 185.

“*Ch. testa tenuiuscula, fere lanceolata, strigis flexuosis fuscis interdum vix conspicuis ornata; spiræ peracutæ anfractibus parum convexis, ultimo spiram bis æquante; apertura pyriformi, superius peracuta; plica parum prominente. Long. 7½ lin., latit. obliqua 4 lin., longit. aperturæ 5 lin., latit. ejus 2 lin.*”

“In den meisten Quellen der Küste der Wüste Atacama. Von allen verwandten Arten unterscheidet sich diese leicht durch ihre schlanke Form und die schwache Spindelfalte” (*Philippi*).

14. *CHILINA GLOBOSA*, Frauenfeld.

Chilina globosa, Frauenfeld, Verhandl. zool.-botan. Gesellsch. Wien, 1866, p. 197 (woodcut).

Hab. La Plata (*Frauenfeld*).

This is a very globular form, bearing relationship to *C. fluminea*.

15. *CHILINA PATAGONICA*, Sowerby.

Chilina patagonica, Sowerby, Conch. Icon. f. 11 (bad).

The outline of the above figure is fairly correct; but the colouring in the copy of the monograph before me is altogether misleading. The epidermis is olivaceous yellow, marked at intervals with a longitudinal brown narrow stripe, indicative of periods of growth. The transverse spotting is in four principal bands; and a fifth, less conspicuous, is noticeable immediately beneath the suture. The next beneath is the broadest band. The aperture is not yellow, as represented by Sowerby, but whitish, bluish white, or sometimes tinged with brown. The fold, too, on the columella is not nearly so prominent as it appears in the illustration referred to.

16. *CHILINA SUBCYLINDRICA*, Sowerby.

Chilina subcylindrica, Sowerby, Conch. Icon. f. 16.

Hab. Ancud, on the north of the island of Chiloe, South Chile (*Dr. R. O. Cunningham*).

The specimen forming the type of this species, together with others, were collected by Dr. Cunningham during the Surveying Expedition of H.M.S. ‘Nassau’ in 1868. The figure is incorrect, both as regards outline and colour. The penultimate whorl appears decidedly too high, making the spire too elongate. The colour is stated to be “purplish brown,” which is altogether imaginary. The specimens which Mr. Sowerby had before him were coated with a blackish earthy deposit. On removing a portion of this, the ordinary greenish-olive epidermis is discovered beneath, while the shell is ornamented with four transverse bands of brown more or less arrow-head-like spots and lines. The aperture is of a somewhat pale

pinkish-brown colour, and exhibits, more or less distinctly, the external banding. The columella is white or pinkish white, and bears a single distinct but not very strong fold exactly in the middle; and the "lower small one" mentioned by Sowerby does not exist, for neither the specimens themselves nor the figure exhibit a trace of it. The species is rather thick and strong for its size, and consists of five whorls.

17. *CHILINA AMÆNA*, Smith.

Chilina amæna, Smith, Proc. Zool. Soc. 1881, p. 37, pl. iv. f. 18, 18a.

Hab. From a lake near Tom Bay, west of South Patagonia (*Dr. Copping*, *H.M.S. 'Alert'*).

This species is remarkable for its fragility, the slenderness of its form, and the vividness of the markings.

18. *CHILINA PORTILLENIS*, Hidalgo.

Chilina portillensis, Hidalgo, Journ. de Conch. 1880, vol. xxviii. p. 322, pl. xi. figs. 1-1 a.

Hab. Portillo, Argentine Republic, at an altitude of "4000 mètres."

Subgenus *PSEUDOCHILINA*,

Dall, Ann. Lyc. Nat. Hist. N. York, 1870, vol. ix. p. 357.

"Shell thin, covered with a rough fibrous epidermis; spire elevated, acute" (*Dall*).

19. *PSEUDOCHILINA LIMNÆFORMIS*, Dall.

Pseudochilina limnæformis, Dall, Ann. Lyc. Nat. Hist. N. York, 1870, vol. ix. p. 357.

Hab. Chile.

"The curious epidermis and broad plicate columella alone distinguish this singular shell from a *Limnæa*" (*Dall*).

8. On Butterflies from Japan, by ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.; with which are incorporated Notes and Descriptions of new Species by MONTAGUE FENTON.

[Received September 8, 1881.]

The present paper gives an account of the Butterflies observed in Hokkaido by Mr. Fenton, together with one or two species subsequently obtained from other sources. Some of the specimens have been in my hands since 1878; but without seeing all those included in Mr. Fenton's notes it was impossible for me to publish any thing concerning them. Now that the whole of the species have been submitted to me, I gladly make them known to science.

Writing from Tokio University on the 9th of November, 1878, Mr. Fenton says:—"I have received all my collections from Hok-